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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,208	01/07/2004	Thomas E. Drake JR.	019843.0241 (TA 00728)	5646

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EXAMINER	
SAINT SURIN, JACQUES M	

ART UNIT	PAPER NUMBER
2856	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/753,208	THOMAS E. DRAKE, JR	
	Examiner	Art Unit	
	Jacques M. Saint-Surin	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *9-19* is/are allowed.

6)☒ Claim(s) *20-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office action is responsive to the amendment of 03/28/05.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. The indicated allowability of claims 20-25 is withdrawn in view of the newly discovered reference(s) to Chang et al. (US Patent 6,062,084 and 6,823,737). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

4. Claim 20 and 22-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Chang et al. (US Patent 6,062,084).

Regarding claim 20, Chang discloses a method for testing an object for present or potential defects (see: col. 4, lines6-18), comprising:

scanning the object (wafer 44, see: col. 5, line 58) with a sensor means (laser emitter 62, see: Figs. 5a and 5b) to generate data for the object (44);

comparing the data for the object for correlation with reference data (an ultrasonic receiver then receives reflected ultrasonic waves from the surface defects and the signals received by the ultrasonic receiver is then sent to a process controller 20 for data processing, see: col. 5, lines 46-51) ,

identifying any defects as a result of the comparison (the emitter 66 and receiver 68 provide further capability of the laser detection unit for detecting smaller cracks that

may appear only on the bottom side of the wafer, a continuous laser is normally used as the laser emitter 62, 66 such that larger defects such as cracks or missing edges can be detected, see: col. 5, lines 62-65 and col. 6, lines 28-41);

wherein the sensor means includes a robot for sensing, monitoring at least one sensor on the robot, and moving the at least one sensor in X, Y, or Z directions and/or about at least two axes (the apparatus includes a robot (robot transport device is capable of moving in x, y and z directions such that is capable of delivering a wafer from any position, see: col. 5, lines 28-30).

Regarding claim 22, Chang discloses a robot 30 which inherently is moved about any of a pitch, roll and yaw axis.

Regarding claim 23, Chang discloses an ultrasonic detection unit for emitting and receiving an ultrasonic wave reflected by a crazing in said wafer edge, see: col. 7, lines 5-7.

5. Claims 24-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Chang et al. (US Patent 6,062,084).

Regarding claim 23, Kepler discloses scanning the object (concrete structure D) with a sensor means (laser signal generator 12, see: Fig. 1) to generate data for the object (concrete structure D, see: Fig. 1 and col. 2, line 48);

comparing the data for the object for correlation with reference data (the signal content of the received laser beam will be related to, i.e., will be a function of, the characteristics of the acoustic wave 20 and these characteristics will change, i.e., the characteristics of the acoustic wave 20 will be modified by, a defect or anomaly in the

concrete dam structure D. For example, the time of travel and/or the degree of attenuation of the received laser beam may be affected and this can be determined based on a comparison calibrated reference signals, see: col. 3, lines 1-9); identifying any defects as a result of the comparison (the output signal produced by receiver 14 is received by a signal processor 16 which processes the signal to derive information with respect to the dam structure, see: col. 3, lines 9-11);

initializing the sensing means relative to a fixed spot in order to precisely locate the object (the acoustic source 12 comprises a steerable phased array; the term steerable is intended to indicate that the acoustic source 12 can be electronically controlled to produce a directed and focused acoustic beam. The use of an electronically controlled acoustic source provides improved coverage and control of the inspection process because the acoustic signal can be precisely steered throughout the large concrete structure D, see: col. 2, lines 41-48).

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US Patent 6,062,084) in view of Kepler et al. (US Patent 6,823,737).

Regarding claim 21, Chang does not disclose initializing the sensing means relative to a fixed spot in order to precisely locate the object. Kepler discloses the acoustic source 12 comprises a steerable phased array; the term steerable is intended to indicate that the acoustic source 12 can be electronically controlled to produce a directed and focused acoustic beam. see: col. 2, lines 41-48). It would have been obvious to one having ordinary skill in the art at the time of the invention to utilize inching the techniques of Kepler because the use of an electronically controlled

acoustic source provides improved coverage and control of the inspection process because the acoustic signal can be precisely steered throughout the large concrete structure D thereby, making the above combination very effective for achieving reliable results.

Allowable Subject Matter

7. Claims 9-19 are allowed.

Response to Arguments

8. Applicant's arguments with respect to claims 9-22 have been considered but are moot in view of the new ground(s) of rejection.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacques M. Saint-Surin whose telephone number is (571) 272-2206. The examiner can normally be reached on Mondays through Fridays 10:30 A.M. -7:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272 2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jacques M. Saint-Surin
June 06 13, 2005

HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
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